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ABSTRACT

This exploratory-interpretative study has the objective of describing patterns of cognitive-ethical developmental changes using Perry's model and data-driven content categories. In-service teachers taking a multicultural education graduate course (n=55) participated as insightful subject-researchers. Three major patterns were found: (1) experienced teachers linked their educational philosophies and practices, indicating higher cognitive-ethical developmental levels; (2) different content-knowledge modules led to various cognitive-ethical developmental levels; and (3) teachers could not connect teaching practices, research, and multicultural education courses. In conclusion, teachers need to transform their educational philosophies into concrete strategies in multicultural education courses. One table summarizes contents of philosophical and reaction papers. (Contains 16 references.) (Author/SLD)

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Taking the Risk to Change Schools from Within: Educators' Cognitive Growth Through Multicultural Education

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Abstract

This exploratory-interpretative study has the objective of describing patterns of cognitive-ethical developmental changes using Perry's model and data driven content categories. In-service teachers taking a multicultural education graduate course participated as insightful subject-researchers. Three major patterns were found: (1) experienced teachers linked their educational philosophies and practices indicating higher cognitive-ethical developmental levels; (2) different content-knowledge modules led to various cognitive-ethical developmental levels; and (3) teachers could not connect teaching practices, research, and multicultural education courses. In conclusion, teachers need to transform their educational philosophies into concrete strategies in multicultural education courses.

Taking the Risk to Change Schools from Within: Educators' Cognitive Growth Through Multicultural Education

The purpose of this exploratory-interpretative study can be divided into two objectives: (1) to describe existing patterns and changes in cognitive-ethical developmental stages of in-service teachers taking a multicultural education graduate course; and (2) to document the effectiveness of critical and reflective thinking as a pedagogical strategy for creating cognitive dissonance and changes in cognitive-ethical developmental stages and belief systems towards multicultural issues. Then, this study aims to understand the dual process of dynamic and reciprocal change in teachers' cognitive and ethical development in multicultural contexts. I consider important to document current efforts to implement different pedagogical strategies used in multicultural education because descriptions of teachers' educational philosophies about multicultural issues are still difficult to find. In addition, I consider that a description of changes in cognitive-ethical developmental stages when using critical and reflective thinking can reveal new interactions and open new research questions. In the following section, a critical review of the constructs studied in this paper will be presented including the role of critical and reflective thinking in higher education and multicultural contexts, the relationship between teachers' educational beliefs and practices, and the methodological problems of defining and measuring the construct of teachers' educational beliefs followed by the position taken in this paper.

Critical and Reflective Thinking

Traditionally, critical and reflecting thinking have been considered a central part of professors' scholarly teaching and research activities. Then, professors should instill in students a scholarly attitude for questioning and generating new knowledge and becoming active learners. However, currently passive learning models are commonly implemented in which students are given the role of consumers of information and are

required to regurgitate memorized facts and to oversimplify knowledge. These same 3
passive education models have been reproduced by elementary and secondary teachers.

Presently, we are living through changes for the better. The school reform movement endorses active models and strategies for learning in order to meet the idiosyncratic needs of culturally and linguistically diverse children in our public school system, and to develop in majority and minority children critical thinking skills. In response to the school reform movement, current teacher education programs require multicultural education courses. However, educators do not only need to be familiar and sensitive to individual, cultural, and linguistic differences present in our school children. But educators also need to examine and become aware of how much their teaching is powerfully influenced by their own preconceived ideas, principles, assumptions, values, and beliefs. Moreover, educators need to undergo an immersion process of "learning how to think critically" in these multicultural education courses in order to become role models and social agents of change for infusing critical thinking abilities in diverse children in our public schools.

The current difficulty of implementing the reflective and critical thinking pedagogical model is related to different underlying theoretical perspectives. According to Gray (1993), two different perspectives can be identified, where critical thinking can be conceptualized as: (1) a set of sequential cognitive skills or abilities for evaluating knowledge that can be explicitly taught, and (2) a disposition or attitude of reflective skepticism that varies according to the learners' reasoning styles and the characteristics of the content to be learned within an immersion context. Following the second perspective, Gray (1993) considered the use of instructional activities that focus on thinking about ideas, modeling thought, teaching study techniques involving elaboration, holding discussions, and testing and grading for rewarding thought as central for developing critical thinking skills. Thus, the classroom becomes a social environment in which the instructor functions as a role model and mediator to facilitate the development of ideas in

students. Following also the second perspective, Adler (1992) proposed critical thinking 4
instructional strategies based on elaboration that can take the form of visualizing ideas, relating prior experiences and knowledge to the new content to be learned, relating concepts, and illustrating concepts through examples. Moreover, according to Pressley, Wood, Woloshyn, Martin, King, and Menke (1992) learning involves meaningful transformations and relations of the content to the learner's prior knowledge. Pressley et al. (1992) also suggested that elaborative interrogation can facilitate the change of misconceptions to newly acquired knowledge, especially when students are confronted with their incorrect application of concepts. Then, following the second perspective, in order to transform content into meaningful conceptual elaborations, the learner needs to think critically about concepts, and to construct subjectively meaningful elaborations.

The conceptualizations underlying critical and reflective thinking are very similar, both are complex constructs that have been studies from different perspectives. As stated by Alexander, Schallert, and Hare (1991), the problem is that different researchers refer to the same concepts using different terms. For instance, Adler (1993) considered that reflective thinking involves scholarship into practice that merges research with critical inquiry in educators. For Adler (1993) critical inquiry involves posing questions, debating and discussing ideas with colleagues, making decisions, and considering ethical and sociopolitical alternatives about teaching and learning. Thus, according to Adler (1993) students and teachers can act as researchers for reflecting upon the subjective nature of learning and teaching. Then, the best students and scholars are the ones who can reflect critically on their own learning and on their own practice. As a result, following Adler's definition, reflective thinking opens up a new paradigm that was used in this study for participating as subjects and researchers within a classroom situation.

Moreover, by acknowledging the subjectivity involved in reflective thinking, a constructivistic approach is assumed in this paper towards meaningful knowledge development. Within this approach, subjectivity involved in knowledge construction is

not considered anymore a methodological problem, but instead is conceptualized as the richness of human beings' ability to represent knowledge symbolically. Then, gaining new knowledge also leads to personal growth and maturation; because learners engage in cognitive-affective processes of subjective meaning construction in relation to their prior knowledge and personal experiences. However, we also share common experiences when we engage in the subjective process of knowledge construction. Thus, similar phases can be identified among learners in relation to cognitive-affective processes.

Teachers' Beliefs

According to Alexander et al. (1991), the term "teachers' beliefs" is not used consistently as many other constructs in psychology. Different connotations of the term "teachers' beliefs" are given by researchers, such as *attitudes, perceptions, applied knowledge, principles guiding practices, perspectives, personal philosophies or epistemologies, subjective knowledge*, etc. According to Richardson (in press), teachers' beliefs are related to their classroom practices; however, there are different conceptualizations of the direction of this relationship between beliefs and practices. Richardson, Anders, Tidwell, and Lloyd (1991) found that teachers' beliefs regarding reading instruction preceded changes in practices. A second conceptualization states that teachers' practices precede changes in their beliefs. A third conceptualization advocates an interacting relationship between beliefs and practices. Richardson (in press), following Green (1971), conceptualizes beliefs as systems or clusters organized in a semi-logical structure of primary and secondary beliefs. The separation of beliefs in clusters allows for the presence of contradictory beliefs across content and clusters or belief systems. Then, following Green (1971) and Richardson (in press), teachers should be provided with opportunities for reducing isolated belief systems and of maximizing relations across belief systems.

Belief systems have been also related to knowledge, for instance Richardson (in press) considers that knowledge is a psychological subjective process related to beliefs.

Alexander et al. (1991), defined knowledge as beliefs that an individual helds as true. Thus, the subjectivity involved in knowledge acquisition can be related to different idiosyncratic connotations in meanings. Teachers' beliefs is defined by Kagan (1992) as implicit assumptions, internalized maps, a form of personal knowledge, and creative ability leading to problem-solving activities. Kagan (1992) considered that most teachers' knowledge can be clustered as beliefs commonly held as "true" within the profession. In addition, Kagan (1992) stated that the acquisition of new knowledge involves change in belief systems in the learner, process in which implicit beliefs are made explicit due to being exposed to opportunities for experiencing cognitive dissonance and restructuring. Opportunities for cognitive dissonance are often found by teachers in their classrooms, as real-life problems tend to be ill-structure and ill-defined. However, it may be the case that within academic learning situations, teachers can be presented with artificial and well-structured conceptual perspectives that do not require change of belief systems in order to be acquired because the complexity of reality is oversimplified.

Kagan (1992) pointed out that even though different researchers conceptualized the term "teachers' beliefs" from different approaches, results have yielded consistently two major patterns: (1) relatively stable and resistant to change beliefs are held by teachers, and (2) a congruent style of teaching tends to be associated with teachers' beliefs which varies in relation to experience in teaching. Related to this second pattern, Millies (1990) showed that there was a relationship between teachers' beliefs and behaviors which was influenced by their teaching experience. In addition, Millies (1990) could also map the relationship between beliefs held by educators and their behaviors, proposing the following path: educators held implicit values and beliefs which can lead to guiding principles, selection of strategies and teaching behaviors. That is, teachers could explicitly articulate their beliefs when they have had experience teaching. I would add to this mapping of beliefs and values proposed by Millies (1990) that there is a link between personalities of educators and the afffective and cognitive processes involved in the

emergence of teachers' educational beliefs. Major affective processes involved in belief 7
systems include identity, self-concept, attitudes, values, perceptions, and attributions held by educators. Major cognitive processes involved in belief systems include knowledge levels, metalinguistic awareness, conceptualization of educational issues, misconceptions, and lack of knowledge present in educators. Moreover, affective and cognitive processes interact closely influencing educators' personalities and belief systems.

Methodological Problems Involved in Measuring Beliefs

A major methodological problem associated with implementing research studies that focus on teachers' beliefs is the difficulty involved in operationalizing and measuring this construct. In general, there are two broad conceptualizations of teachers' beliefs: (1) existential epistemology considers that teachers choose theoretical and applied approaches, resulting in value judgments, based on their own personal and professional experiences within a sociocultural context; and (2) objective epistemology considers that educational knowledge is a "real entity" independent of sociocultural practices and of the learner's subjectivity. Due to the difficulty of operationalizing the construct of teachers' beliefs, researchers have to use inferential or indirect measures. For instance, teachers' beliefs are measured through teachers' verbal reports, or through observing overt teaching behaviors in the classroom and then making inferences for explaining the meaning of these behaviors. Kagan (1992) pointed out that the same instructional practices can be the expression of different underlying beliefs. Another problem mentioned by Kagan (1992) is the difficulty of consciously articulating beliefs, which tend to be implicit especially among novice teachers. Adding to these problems, the private nature of beliefs may be an obstacle for honest expression in fear of been evaluated and criticized by researchers.

The methodological problem of the difficulty of measuring teachers' beliefs has been pointed out by different researchers. For instance, Erwin (1983) stated the need to develop reliable and valid instruments that measure higher education students' conceptual knowledge and beliefs, possibly based on Perry's scheme (1970) of cognitive-ethical

development. Perry's scheme (1970) explains how college students describe, understand, 8
and construct meanings of their worlds. The model is hierarchical and structural, that is lower levels of cognitive-ethical development are the basis for developing new and higher levels. This model is also based on the concept of disequilibrium as a motivation or drive that guides the individual to move into a higher developmental level. These two characteristics, structuralism and disequilibrium, make the conceptual underlying basis of Perry's (1970) scheme very similar to Piaget' s (1965) theory of cognitive development.

This scheme presents four stages of intellectual and ethical development in college students, corresponding to nine positions, which describe how people understand or make meaning of their world. The first stage is dualism, in which individuals tend to see issues in clear-cut, simplistic terms and look to authorities for the answers. The second stage is called multiplicity, individuals in this stage recognize alternative perspectives given by other authorities, which influence their own perspectives. However, they are still afraid of assuming a moral position and of making decisions and accepting consequences. The third stage is called relativism, in which individuals are able to make decisions, and accept the resulting responsibilities and consequences. At the third stage, individuals are able to take their own position, and they can tolerate other contradictory viewpoints. The fourth and last stage is called commitment and empathy, at this fourth stage individuals have already made major decisions and they have gained awareness of their impact on other people. These individuals have developed sensitivity and responsibility about other people and society in general. As an example of differences between these stages, Erwin (1983) found that freshmen students who were in the dualistic stage lack self-confidence, and also were not aware of their feelings of lack of commitment and confortableness with their physical and phychological self. In contrast, students who were committed had a greater self-confidence level, were more mature, participated more in community groups assuming positions of responsibility, and had a greater awareness of their feelings about their physical and psychological self.

I consider that the measurement of teachers' beliefs through verbal oral or written expressions can be used as an instrument for data collection, as well as a tool for constructing new knowledge and stimulating change in attitudinal beliefs. Writing and discussing ideas with peers increases awareness levels of attitudinal beliefs because the semantic function of language leads the learner to gain accessibility to implicit knowledge. This semantic function of language has been called in cognitive psychology "metalinguistic awareness", a term that refers to the use of language as an abstract logic tool for reflecting upon thinking processes. Thus, the metalinguistic nature of articulating thoughts through engaging in writing and discussion makes these activities a perfect milieu for reflective thinking processes. Karmiloff-Smith (1986) refers to the function of metalinguistic awareness as the progressive restructuring of underlying processes of knowledge that change from an implicit to an explicit form. Thus, language provides the opportunity to gain awareness of our internal cognitive processes; such as our own belief systems, values, attitudes, and educational philosophies. In addition, due to the presence of different forms of knowledge that are represented through language, Karmiloff-Smith (1986) also pointed out that the same learner could be at different levels of representational change for different knowledge content domains. In relation to this last statement, Kagan (1992) reported that teachers' beliefs may vary according to the instructional content domain or in relation to the type of instructional programs and materials used. I propose that teachers' academic knowledge level and attitudinal awareness may vary across content domains, due to different sociocultural personal and professional experiences that teachers can access explicitly.

Position Taken Regarding Teachers' Beliefs

I consider that teachers' sociocultural personal and professional experiences do influence their beliefs and teaching practices. Thus, an existential epistemological position is taken in this paper, as the objective of this study is to use reflective teaching as an educational strategy for changing teachers' cognitive-ethical developmental stages. I

think that gain in academic knowledge in multicultural education is intimately related to a 10
change in belief systems as students construct knowledge subjectively using as a basis their prior knowledge and experiences. I think that belief systems are subject to a dynamic process of change because individuals negotiate sociocultural meanings of personal value judgments within a life-time learning process of academic and personal learning experiences. Thus, I consider that belief systems are influenced by practical experiences within a sociocultural milieu, which in turn can help the individual to make explicit their beliefs given opportunities for elaboration and experiential transformation.

I think that beliefs are like "filters" or "shields" for the construction of concepts which act as "glasses" or "windows to reality" that can lead to misconceptions or myths held by educators. It has been my experience as an instructor that the most helpful opportunity for students to explicitly articulate their beliefs is to confront them with a real-life, complex, and ill-structured problem in the form of a direct experience. For instance, in this study students were asked to write about their own beliefs, and then to act as "researchers" for categorizing the data collected and for describing patterns found in their classmates' beliefs regarding multicultural issues. Thus, students can be provided in the classroom with the opportunity to construct "knowledge derived from practice".

According to my view, teachers' beliefs are related to knowledge construction because the process of learning involves a subjective transformation of external objects (information) in internal objects of thought (knowledge). However, I consider that teachers' beliefs are also different and deeper than knowledge. I think that beliefs are the underlying philosophies and idiosyncratic ideas resulting from prior experiences and knowledge held by an individual. Then, I think that beliefs are general principles, assumptions, and conceptualizations underlying knowledge. Thus, my view is related to a constructivistic position that differentiates among information, knowledge, and beliefs. Then, it is my conceptualization of teachers' belief systems that they are dynamic internal representations of concepts related to teaching and learning which are bounded by

personal and sociocultural meanings, and are content driven. Thus is, the development of 11
beliefs is a life-time learning process that is related to personal and professional experiences. In addition, the generation of beliefs requires developmental time because it involves the formation of new knowledge. Moreover, the existence of misconceptions can be overcome by offering the learner enough developmental time and opportunities for examining and probing existing beliefs. Thus, beliefs can act as "shields" that prevent new knowledge construction and maturational processes of personal growth.

Method

Research Questions

Three major research questions were stated and explored in this study: (1) Is there a link between beliefs and patterns of cognitive-ethical developmental stages in teachers?; (2) Do possible existing links between beliefs and patterns of cognitive-ethical developmental stages vary for novice and experienced teachers?; and (3) Do teachers show different cognitive-ethical developmental stages across different content modules?

Subjects

Subjects for this study were in-service teachers taking a graduate level multicultural education class who were invited by their instructor "to take the risk" to participate in a learning experience as subjects and "students-researchers". Volunteer "student-researchers" helped with data categorization using a qualitative cognitive-ethical development model (Perry, 1970), and content categories derived from the data collected.

From the 55 students who agreed to participate in his study, the majority (55.9%) were in-service teachers and part-time female students who were between 26 and 40 years of age. In the youngest age group (20-35) there were 35 students (63.6%), and in the oldest age group (36-45) there were 20 students (36.4%). The majority of students (81.8%, n=45) reported a White ethnicity; only a small proportion of students identified with a minority ethnic background: Hispanic (7.3%, n=4), African-American (5.5%, n=3), and Asian-American (5.5%, n=3).

Instructional Strategies Used

In this study, it is considered that learning about multicultural education concepts involves taking the risk to engage in cognitive growth at both objective and subjective levels of knowledge. Moreover, this learning process of change can only take place in a teaching environment in which the instructor is willing to take the risk to engage in a reciprocal cognitive growth process. In this learning-teaching process, both the learner and the instructor believe that multicultural concepts involve cognitive-objective and affective-subjective levels leading towards personal growth and maturation. Thus, this study uses as a framework for developing instructional strategies and activities Perry's stage-like model (1970) of cognitive-ethical development that proposes a parallel cognitive growth in the intellectual and affective developmental domains within learners.

In addition, a critical and reflective thinking philosophy was adopted by the instructor for developing instructional strategies and activities for this course. It is the argument proposed in this study that change in educators' cognition will emerge as new conceptual and applied knowledge is constructed in a community of learners. I propose that through reflection educators can gain awareness of the influence of their own belief systems on their conceptual knowledge about multicultural education. Thus, models of reflective thinking can be transformed into educationally applied techniques and be implemented as instructional strategies for teacher education in multicultural issues. The strategies used in this study mainly focused on providing educators with an environment that stimulated "freedom within structure" (King, 1992). Questions and activities that required reflection about inner beliefs and attitudes towards multicultural education issues were used for provoking thought. I believe that teachers are professionals, and thus they need to understand the implicit connection that exists among theories, underlying philosophies, and personal beliefs that are expressed in instructional strategies used in their classrooms. Thus, in this study promoting educators' cognitive change is viewed as

restructuring from within belief systems in educators who were experimenting "freedom within structure" in multicultural education contexts.

In order to stimulate teachers to think, react, discuss, and discover their own positions different instructional strategies within the philosophy of critical and reflective thinking were used. The major purpose of these instructional strategies was to stimulate the emergence of cognitive dissonance or disequilibrium and, ultimately, attitudinal change. That is, the major purpose for the inclusion of different instructional strategies was to give different opportunities and ample developmental time to make explicit teachers' preexisting implicit personal beliefs, to challenge the adequacy of those beliefs, and to provide extended opportunities to integrate and transform their knowledge through assimilation and accommodation processes. Writing and engaging in dialogue with classmates were used as major tools for stimulating critical reflection and increasing the level of consciousness of implicit beliefs. My objective as an instructor was to increase in students their level of metalinguistic awareness, that is their explicit knowledge of beliefs, attitudes, values, assumptions, and philosophical principles held regarding controversial major issues in multicultural education. Thus, teachers had the opportunity to gain awareness of their own and their classmates' current knowledge levels, educational beliefs, and background experiences about multicultural education.

Instruments

With the purpose of measuring teachers' cognitive-ethical developmental levels, teachers were asked to write a philosophical belief paper and a reaction paper. Moreover, the course included a variety of activities (e.g., conducting an educational beliefs survey study and an interview to an educator) designed to facilitate the examination and explicit articulation of students' educational beliefs regarding multicultural issues, as well as different formats for course presentations (i.e., lectures, discussions, activities, case studies, students' presentations, and invited speakers). Furthermore, different theoretical and applied issues in multicultural education were included in class content for

stimulating critical and reflective thinking. In addition, reflective teaching strategies were used including: (1) exposing students to other teachers' belief systems; (2) sharing of their educational philosophies; (3) reacting to controversial issues in multicultural education; (4) discussing, exchanging, and brainstorming ideas and opinions; and (5) reading about contradictory philosophical and theoretical positions on controversial issues. Teachers were stimulated to transform the conceptual content of lectures, readings, and classmates' reports for the purpose of discovering their own opinions, perspectives, beliefs, values, principles, and applied approaches for controversial multicultural education issues.

Procedure

Students were invited to participate in this study on a voluntary basis as subjects and/or "student-researchers", and to sign a consent form if they decided to release the information gathered for a research study. After the data collection had been completed, the information was analyzed qualitatively in three major steps of data translation: (a) initial tabulation and coding; (b) separate analysis of individual and groups of questions; and (c) synthesis, interpretation, and discussion of results.

Results and Discussion

Educational Philosophies Paper

Regarding the cognitive-ethical stages achieved by the students, the categorization results using the Perry's scheme (1970) are shown in Table 1. The reliability coefficient between the group of five volunteer students who served as judges, and the author of this paper was $r = .85$, assuring a good confidence level in the results. As shown in Table 1, the most common stage of cognitive-ethical development achieved by these teachers in their philosophical papers was the third stage of relativism, position 6 leading toward stage four of commitment and empathy. These results are higher than the range of cognitive-ethical developmental levels in Perry's scale (1970) reported by Bradley-Stonewater, et al. (1986). This was a study conducted with a typical college population,

as the sample included 24% of graduate students, mainly in education and philosophy, 15
and 76% of undergraduates in a wide range of majors. Bradley-Stonewater et al. (1986) selected this sample in order to include the range typically found in college students, including positions 2 through 5 on the Perry Scheme.

Place Table 1 about here

A relation was found between expression of both philosophy and concrete educational practices which lead toward higher levels of cognitive-ethical development according to Perry's scheme. That is, the more experience a teacher had, the higher levels of cognitive and ethical development that this person achieved. A possible explanation can be that individuals with more teaching experience seemed to be more creative, holistic, and eclectic in their teaching approaches. In addition, due to their experience these individuals could go from theory to practice in a coherent manner. That is, they could express verbally their philosophies, as they were conscious of their educational values and beliefs; and at the same time, they would give concrete examples of their teaching practices as illustrations. These expert teachers could show a balance between ideals and reality, objectivity and subjectivity, leading to suggest that teaching is not a technique but a complex art.

In relation to this need for integration, another pattern found was that teachers could not see a clear connection between teaching practices, research, and teacher education in current teacher training programs. As Millies (1990) suggested, experience by itself does not assure a gain in accessibility to self-reflection. Millies pointed to the need to help teachers achieve a higher level of accessibility to their own belief system through an understanding and recognition of the personal and professional cognitive-ethical development of the individual teacher. As mentioned by the students in the class discussions of this multicultural education course, teachers need a support group within

their training programs where they can hear the voice of other teachers, and have a space 16
for reflecting upon their problems.

Another pattern found in the data was that the more the teachers expressed philosophical and pedagogical values on the diversity of learners and could illustrate these values using concrete teaching activities, the higher the teacher scored on Perry' s scheme. Furthermore, the more experienced teachers seemed to have a more eclectic and flexible view of children' s learning processes than novice teachers. Expert teachers considered the stimulation of the children's cognitive and socioemotional development their priority. These expert teachers described their role as guides and models for assuming self-responsibility, commitment, and love for learning. In conclusion, as "student-researchers" categorized the philosophy papers, patterns or profiles about the characteristics of the teachers at each stage began to emerged very clearly. When these "student-researchers let the data speak to them", they were amazed of the commonalties found across papers and across judges. These results, were in opposition to their perceptions of the papers at the beginning of their task, as these papers seemed to be a very disconnected set of subjective individualities. In sum, this pattern found in the data pointed out that teachers need the opportunity to transform their educational philosophies and expectations into real life experiences in the classroom.

The first stage of dualism included teachers who viewed their roles as imparters of knowledge, while students just sit quietly on task, completing all work on time. Typically these were novice teachers who could not illustrate their inflexible teaching principles with concrete examples of their pedagogical practices as a result of their unclear or hard to express philosophies and beliefs. The second stage of multiplicity was exemplified by teachers who had began to recognize different points of view due to their acquired teaching experience (an average of 2 years); however, they were still looking for the right answers in an external source. These teachers had gain consciousness of their educational philosophies, as they could express their values and beliefs verbally in

their papers. These teachers reflected deeper thought and time clarifying personal philosophies, which resulted in a high respect for the individualism of their students. 17

The third stage of cognitive-ethical development, relativism, reflected teachers who saw their role as a guide for placing all knowledge in context, and also as challengers for gaining more knowledge. They tried to act as children' s supporters in order to help them clarify their commitments and live up to their values. These teachers could give concrete examples of pedagogical activities based on their values and beliefs. Teachers in the stage of relativism see the students' role as evaluating perspectives, making judgments in context on the basis of evidence, clarifying commitments, choosing and then living up to a choice of values outlined in curriculums. The classroom environment that the third stage teacher creates is open, learning is overt, and the learning-teaching situation is evaluative.

The fourth stage, commitment and empathy, demonstrated teachers who were aware of their impact on their students, they were sensible about honoring individual differences, and they assumed great responsibility for improving society in general. Fourth stage teachers become advocates and consultants, helping students set up self-directed projects and independent learning exercises. All learning is derived from the self-imposed exercise of creative development on real projects for real audiences; in which students discuss, network, plan, execute and then evaluate the finished products. These teachers valued a student-centered learning environment, in which the teacher educated "the whole child" through her own enthusiasm for learning, giving more emphasis to the socioemotional development of children rather than stimulating solely the academic domain. These teachers favored eclectic teaching strategies that were flexible upon the child' s needs, letting children be responsible for their learning process, but at the same time helping children through an open and honest communication. The classroom environment is open and flexible, which is created by the students interactions

in this sociocultural context of learning. These were experienced master teachers, who could express verbally their educational values and beliefs very clearly.

Another trend observed in these papers was the influence of the sociohistorical contexts in which teachers live presently on the content of their philosophies. I argue that if the students' pedagogical papers had been written in the past, they would probably have been lower on Perry' s scale. I suggest that in the past, the school curriculum was reflecting more social and economic trends, rather than focusing on the individual potentials of students. Thus, in the past students were conformed, not guided through education. The civil right movements of the 60's and 70's has helped to raise consciousness about all areas of educational equality, such as special education, multicultural and bilingual education, giftedness, gender and socioeconomic issues, socioemotional development and educating "the whole child", etc. Presently, multicultural education as a school reform movement seems to be emphasizing the role of the educators as facilitators for the stimulation of the potential of the individual. Teachers are becoming aware of their responsibilities and the great impact of their roles as social agents and models, and teachers are accepting the challenge and making the commitment of meeting children's diverse needs. However, as shown in this study, teacher training programs need to change also in order to meet the diverse needs that teachers have at present. Teacher training programs need to focus on raising awareness of educational belief systems and only then, an open minded teacher will emerge, who has been exposed to new conceptual knowledge that underlies and forms the basis for applied educational methods and strategies that meet the needs of diverse children.

In addition, to the Perry' s scheme, a second categorization system focusing on content and inductive analysis was developed for the identification of themes in the subjects' responses. The underlying rationale for this second content categorization was based on the assumption that different levels of cognitive-ethical development would be found within and between individuals across themes. Lawrence (1992) pointed to the

dynamic nature of beliefs, and cognitive-ethical developmental stages, which are 19
portrayed differently across contents and contexts. Two broad areas were identified in the content of the papers: (1) operations or the actual teaching training and procedures, including three subareas: classroom management, methods and strategies, and teacher education; and (2) the educational philosophy and beliefs of teachers, including three subareas: children' s socioemotional development, children' s learning processes, and diversity in learners.

The classroom management subcategory included the characteristics of the learning environment created by the teacher, such as an open or closed environment, a democratic versus an authoritarian management style, a teacher' s attitude of acceptance versus judgment, and acceptance of low versus high mobility of the children in the classroom. The methods and strategies subcategory included a teacher versus a student centered emphasis, a cooperative group versus a lecture style, and a close versus an open discussion. The subcategory of teacher education included the need for improvement through formal training. The children's socioemotional development subcategory included self-respect, self-actualization. self-confidence, motivation, and respect for others. The learning processes subcategory included self-direction, risk taking, creativity, curiosity, and imagination. The diversity in learners subcategory included idiosyncrasies such as socioeconomic status (SES), cultural factors, gender, and learning styles. Using these two broad content categories, the students' papers were assigned to a cognitive-developmental stage (Perry, 1970).

Results for the content analysis are shown in Table 1. The categorization results based on content differed from the overall categorization of the papers, even though in both cases the Perry' s scheme was used. Results of the content analysis showed that within a paper there was a tendency to cluster within a specific stage on Perry' s scheme. However, based on the content analysis, the performance of an individual teacher tended to vary across different topics. It can be concluded that these results suggest a variation

in the cognitive-ethical developmental stage achieved related to content knowledge. 20
Thus, it can be inferred that cognitive-ethical development is an idiosyncratic process, in which content knowledge develops at different paces.

Moreover, the two lowest content category classifications were related to classroom management, with the majority of teachers assuming a dualistic or relativistic position. This subcategory was followed by teacher education, in which the majority of teachers followed a relativistic position. In all the other four subcategories (i.e., methods and strategies, children's socioemotional development and learning processes, and diversity in learners), teachers followed a position of commitment and empathy. However, the majority of teachers had more knowledge of methods and strategies at the fourth stage. Teachers' knowledge of children' s socioemotional development and learning processes, as well as their knowledge level of diversity of learners varied widely from stage two to stage four. These results suggest that current teacher training programs are emphasizing more content and curriculum oriented knowledge (i.e., methods and strategies), rather than underlying conceptual knowledge on child development and learning processes in diverse children. Thus, most current teacher educational programs do not stimulate teachers to reflect on their belief systems.

There was also some evidence that the experience of reading about and hearing to classmates' educational attitudes and philosophies acted as a tool for gaining awareness of their own attitudes and beliefs. Volunteer "student-researchers" acting as judges reported that their level of awareness of their own subjectivities increased. As a group they could find commonalties across their own subjectivities as judges and also across the individual papers that they were categorizing. That, by negotiating their subjectivities, they increased their objectivity in setting up standards for the group and defining by consensus the profiles of the cognitive-developmental stages found in the content of the papers. These volunteer "student-researchers" acting as judges concluded that the ability to be reflective and to express values and beliefs verbally is a developmental process. Thus,

the higher the cognitive-ethical developmental stage achieved, the more access the person 21
will gain on the verbal expression of beliefs (i.e., metalinguistic awareness).

Reaction Papers

Reaction papers were analyzed qualitatively using Perry' s scheme of cognitive-ethical developmental stages by volunteer "student-researchers". Results are shown in Table 1. Profiles of each stage emerging as patterns were observed throughout the reaction papers. The higher cognitive-ethical developmental stage, commitment and empathy, was portrayed in these reaction papers as an increase in sensitivity and accepting responsibilities regarding contemporary sociocultural issues of concern (i.e., racism, drug prevention, and environmental problems). These individuals were responsible citizens preoccupied for the well being of society in general. They pleated for improving teacher educational programs and teacher activism in educational reform. They reflected on American values in regard to individualism, freedom of choice, and humanity; and its effect on the national community in general. People in this higher stage of development could use their own personal and professional experience as criteria for the evaluation of the issues discussed and the defense of their positions. Thus, they could make the connection between their own values and beliefs and the application of them on educational and national issues. In general, their arguments were passionate and compelling, showing their commitment to live up to their values.

Students in the third stage of development, relativism, were able to put knowledge in context on the basis of supporting evidence supplied by their experiential sources, but they were not ready yet to venture with their own arguments in their discussions. These students used the authors of the articles as points of reference for their discussions, and as models and guidelines for their positions. It seems that these students decided to take a "safe" position following suggestions of authorities. Although these students consider multiple points of view using as models different authors, they could not consider implications or consequences of the authors' positions very strongly, neither could they

weight alternatives fully. However, these students in the third stage were already 22
experimenting with a deeper sense of the debate between opposing positions, as they recognized underlying power relations between groups and the need for commitment in order to live up to their values. Even though, they could recognize the need for commitment, they were not ready yet to accept all the responsibilities that come with this challenge. Thus, students in the third stage offered some support for a tentative and specific solution to the issues discussed, but they did not seem to grasp its ethical and social implications. Finally, students in the second stage of cognitive-ethical development, multiplicity, could evaluate the advantages and disadvantages of being in favor or being opposed to either side of the issue discussed. They could understand that there is not a unique, clear cut "right answer" to defend or oppose a position; however they were not ready to take a stand of their own yet. That is, it is like they are still evaluating the issue and did not want to confront opposing positions yet. They did not offer a clear thesis position, neither a clear focus for their discussion. There were no students in the first stage of dualism in relation to content analysis of the reaction papers.

The content of these reaction papers was related to two topics assigned by the course instructor: the English-only movement, and the school reform objectives proposed in America 2000. Common themes presented in both topics were: (a) a general concern for adequate teacher preparation to meet the needs of present and future school populations, and (b) a concern for societal problems which affect education indirectly and directly. There were also some differences in terms of the themes covered by the two topics. Papers dealing with the America 2000 discussed ramifications of the proposal for students in general without discussing the implications for minority groups. The issue of funding was mentioned in the America 2000 papers only, while the English-only movement papers concentrated on bilingual education issues.

Finally, "student-researchers" reported that they could benefit from the exercise of categorizing the reaction papers in cognitive-ethical developmental stages, because they

could reflect on their own attitudes toward grading and assessment. Furthermore, these 23
students also reported that they gained awareness of their own attitudinal biases, beliefs, and values regarding multicultural education. These volunteer "student-researchers" also reported that the task was challenging, valuable and meaningful.

Conclusions

Teachers reported to benefit from reflecting upon their own attitudes and educational philosophies, as they could become more sensitive and aware of their influence on assuring educational success for diverse children. This self-reflection was stimulated throughout the semester in this multicultural education class, as students wrote about their educational philosophies and reacted to controversial issues in the education of diverse learners (i.e., the English only movement, and the America 2000 educational reform movement). Teachers' responses became more complex as they could perceive the importance of teachers' beliefs on educational success. It seems that reflective thinking is an effective technique for stimulating change in teachers' belief systems regarding multicultural education.

Teachers reported that the most challenging, valuable, and meaningful, but also beneficial class activity was to gain consciousness about their educational beliefs through written essays for their philosophy and reaction papers. In fact, the students that could benefit the most were the ones who volunteer as "student-researchers" because they could see the instructional value of exploring "the internal worlds" of their classmates expressed in their beliefs. Thus, results suggest that increase in awareness levels of belief systems gained through self-reflection resulted from observing others to reflect on their educational philosophies. In sum, reflective thinking is an effective ethnographic research tool, as well as an effective pedagogical strategy for multicultural education.

The voice of teachers from this multicultural education class studied claims for teacher educational programs that focus on critical and reflective teaching models. No

longer educational professionals can succeed with just applied knowledge, they need to 24
become reflective thinkers and researchers in their double role of graduate students and in-service teachers. At the end of the semester, teachers pointed to the need to become advocates in order to take initiative in exploring the external causes of the children's problems. Teachers became empowered, and they believed that they could make a difference. Teachers also realized that in order for this change to occur teachers needed to discover and be sensitive to the many variations among the student population, and to be aware of the influence of their own sociocultural beliefs over children's academic and socioemotional development. Teachers are becoming aware of their responsibilities and the great impact of their roles as social agents and models, and teachers are accepting the challenge and making the commitment of meeting children's diverse needs. However, as shown in this study, teacher training programs need to change also in order to meet the diverse needs that teachers have at present.

Giving teachers the possibility to become aware and sensitive to the uniqueness of the educational needs of majority and minority children should be the major priority of educational institutions when developing multicultural teacher educational programs. There is a need for a redefinition of teacher education programs, which should give teachers the opportunity to gain awareness of their sociocultural belief systems. If teachers are given the opportunity to reflect, they can become aware of their powerful role as models in the education of children. A reflective teacher is an open minded teacher who can meet the needs of diverse children.

This study has scientific as well as educational importance, due to the present need for offering high quality education to the growing number of culturally and linguistically diverse students. Thus, it is proposed in this paper that infusing a reflective and critical thinking philosophy in teacher education models can restructure schools from within, including changing thinking and beliefs of educational faculty and teachers.

Table 1

Frequencies and Percentages of Cognitive-Ethical Developmental Stages Versus General and Content Analysis of Educational Philosophies Papers and Reaction Papers

Cognitive-Ethical Developmental Stages	General and Content Analysis of Educational Philosophies Papers and Reaction Papers															
	Philosophies Papers														Reaction Papers	
	General		Class Management		Methods Structure		Teacher Education		Children's S-Em. Dev.		Children's Learning P.		Diversity in Learners			
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
First Stage: Dualism	7	16	20	36.4	4	7.7	9	16.7	3	5.5	2	3.6	3	5.5	3	5.5
Position 1	1	1.8														
Position 2	3	12														
Second Stage: Multiplicity	3	5.5	12	21.7	7	12.7	3	5.5	14	25.5	8	14.5	12	21.8	5	9
Position 3	3	5.5														
Position 4	0	0														
Third Stage: Relativism	30	54.5	20	36.4	17	30.8	28	50	17	30.9	26	47.2	18	32.7	8	14.5
Position 5	13	13														
Position 6	11	20														
Fourth Stage: Commitment & Empathy	15	27	3	5.5	27	49	15	27.8	21	38.1	19	34.5	22	40	39	71
Position 7	4	7														
Position 8	6	12														
Position 9	4	7														

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